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EXAMINER

LAO, SUE X

ART UNIT

PAPER NUMBER

2151

DATE MAILED: 09/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/240,406

Applicant(s)  
Fernando et al

Examiner  
S. Lao

Art Unit  
2151



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jun 11, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-44 is/are pending in the application.
- 4a) Of the above, claim(s) 11-15 and 22-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-21 and 27-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

### DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 11-44 are pending. This action is in response to applicant's Response to Restriction Requirement filed 6/11/2002. Applicant has elected Group II, consisting of claims 16-21 and 27-44, for examination. Applicant is required to cancel the non-elected claims (claims 11-15 and 22-26) in the next communication.

3. Claims 17 and 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites "the extensible object" on line 2. There is insufficient antecedent basis for this limitation in the claim. For the purpose of art rejection, it is interpreted as "the extensible object model", as best understood and as it appears to be.

Claim 44 recites "the extension object" on line 7. There is insufficient antecedent basis for this limitation in the claim. For the purpose of art rejection, it is interpreted as "the second extension object", as best understood and as it appears to be.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.

5. Claims 16, 18-20, 27, 28, 42, 43 are rejected under 35 U.S.C. 102(a) as being anticipated by Baxter et al (U S Pat. 6,289,500).

As to claims 16 and 42, Baxter teaches a system (IBM San Francisco framework) for extending functionality (to include domain-specific functions) of a class object (ExtensibleItem class which is domain-neutral), comprising: processing unit (110); system memory (120); system bus (160); computer-readable medium (155); and an extensible object model (San Francisco Framework) executed from, wherein the extensible object model creates (DomainItemCreator) an extension object (DomainExtension object) from an extension package (DomainExtension class which implements domain-specific functions) when a requested functionality (domain-specific functions) is not inherent in the class object [it is noted that the domain-neutral extensible items/objects do not provide domain-specific functions], and wherein the extension object extends the class object to provide the requested functionality (provide domain-specific functions to domain-neutral extensible items/objects). See col. 8, lines 45-61; col. 10, line 19 - col. 11, line 67.

As to claim 18, 43, Baxter teaches registering the extension package in an extension database (persistent collection, col. 11, lines 16-22)..

As to claim 19, Baxter teaches store the extension object in system memory (dynamic virtual function table) when the corresponding extension is first referenced (col. 7, lines 20-29.

As to claim 20, Baxter teaches creating an extension provider object (factory ExtensibleItemSpecialFactory) and create the extension object from the extension provider object (create extensions). See col. 11, lines 1-67.

As to claim 27, Baxter teaches extensible object (ExtensibleItem), extension database (persistent collection) having an entry for an extension (extension for a particular domain, ie, of type DomainInterface) for the extensible object; extension package (DomainExtension class and DomainItemCreator) having an interface for obtaining

(DomainItemCreator) an extension object (DomainExtension) that provides the extension for the extensible object. See col. 10, line 19 - col. 11, line 67.

As to claim 28, Baxter teaches a call to the interface in the extension package (client call). See col. 10, lines 64-67.

6. Claim 34 is rejected under 35 U.S.C. 102(a) as being anticipated by Graser et al (U S Pat. 6,275,979).

As to claim 34, Graser teaches a method (San Francisco framework) for extending functionality (support additional method) of a class object (ExtensibleItem) in a run-time environment (at run-time), comprising: receiving a request (invokeMethod()) from an application (client) for functionality that is not inherent in the class object [it is noted that ExtensibleItem has no domain-specific information]; determining if the functionality is available (locate the method name via method table) in a first extension object (Extension1); and directing the request to the functionality in a second extension object (Extension2), when the functionality is not available in the first extension object [It is noted that when looking for arb() method, Extension2 will be returned instead of Extension1]. See col. 5, line 58 - col. 6, line 8; col. 6, line 30 - col. 7, line 18; col. 9, lines 2-9; col. 11, lines 6-10.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17, 29-33, 35-41, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the IBM San Francisco framework as disclosed by Baxter et al and Graser et al.

It is noted that both Baxter and Graser describe the run-time operations of the same IBM San Francisco framework, emphasizing on different aspects. The combination of Baxter and Graser provides a more complete picture of the San Francisco framework. Therefore, it would have been obvious to combine the teachings to provide enhancement in various aspects.

As to claim 17, IBM San Francisco framework provides (Graser) notifying the extensible object when the extension object is deleted (previous extension overridden and deleted, col. 7, lines 18-53).

As to claim 29, the IBM San Francisco framework provides (Baxter) a method for extending functionality (new domain extension) of a class object (ExtensibleItem) in a run-time environment (San Francisco framework), comprising: receiving a request from an application (client invokes) for functionality that is not inherent in the class object (new domain extension needed); determining if the functionality is available in a first extension object (look for special factory ExtensibleItemSpecialFactory); obtaining an extension package (classes, collections and factories) having computer-executable instructions associated with the extension object functionality (extension of type DomainInterface), wherein the extension package proffers an extension provider object (special factory) when the functionality is requested; specifying parameters (pass domain parameters) to the extension provider object to create a second extension object (create extension object via ExtensibleItemFactory). See col. 11, lines 6-10. The IBM San Francisco framework also provides (Graser) a step for directing the invocation to the second extension object (Extension2 which implements the requested arb()) after the second extension object has been created. See col. 5, line 58 - col. 6, line 8; col. 6, line 30 - col. 7, line 18; col. 9, lines 2-9; col. 11, lines 6-10.

As to claim 30, note discussion of claim 18.

As to claims 31, 36, note discussion of claim 27 (Baxter) for storing the extension package in an extension database.

As to claims 32, 40, San Francisco framework provides (Graser) searching for an entry associated with the functionality (col. 6, lines 9-41).

As to claims 33, 41, San Francisco framework provides (Graser) creating the second extension object when the extended functionality is first referenced (create new extension and add to method table), and locating (look up method name) the second extension object when the extended functionality is subsequently referenced (col. 6, lines 9-65).

As to claim 35, note discussion of claim 29 for obtaining an extension package.

As to claim 37, note discussion of claim 18. register the extension package in an extension database stored on.

As to claims 38 and 39, note discussion of claim 20.

As to claim 44, the IBM San Francisco framework provides (Baxter) a method for extending functionality (new domain extension) of a class object (ExtensibleItem which is domain-neutral), comprising: invoking (client invokes) a functionality that is not inherent in the class object (new domain extension); determining if the invoked functionality is available in a first extension object (look for special factory ExtensibleItemSpecialFactory that should be used); creating a second extension object (use standard factory ExtensibleItemFactory) when the invoked functionality is not available in the first extension object (otherwise use the standard factory). See col. 11, lines 1-11, 39- 50. The IBM San Francisco framework also provides (Graser) a step for directing the invocation to the second extension object (Extension2 which implements the requested arb()) after the second extension object has been created. See col. 5, line 58 - col. 6, line 8; col. 6, line 30 - col. 7, line 18; col. 9, lines 2-9; col. 11, lines 6-10.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baxter et al as applied to claim 16 and in view of Schmidt et al ("An Object-Oriented Framework for Developing Network Server Daemons").

As to claim 21, Schmidt teaches framework based software architecture (service configuration), including creating an event filtering and sourcing object (event handler) to handle events (events) generated by an extension object (service object). See pages 7-8, section 4.1. Therefore, it would have been obvious to create an event filtering and sourcing object in Baxter to handle events generated by an extension object. In so doing,

configuring different types of I/O events from a client would have been simplified with the class library (page 6, section 3.2.3).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7238 for After Final communications, (703) 746-7239 for Official communications and (703) 746-7240 for Non-Official/Draft communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Sue Lao *SxL*

August 21, 2002